



# 10

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## RAW SEQUENCE LISTING

DATE: 04/18/2002

PATENT APPLICATION: US/09/847,637B

TIME: 14:49:13

Input Set : A:\13125-002001.txt

Output Set: N:\CRF3\04182002\I847637B.raw

4 <110> APPLICANT: Naparstek, Yaakov  
5 Ulmansk, Rina  
6 Kashi, Yechezkel  
8 <120> TITLE OF INVENTION: NOVEL AMINO ACID SEQUENCES, DNA ENCODING  
9 THE AMINO ACID SEQUENCES, ANTIBODIES DIRECTED AGAINST SUCH  
10 SEQUENCES AND THE DIFFERENT USES THEREOF  
13 <130> FILE REFERENCE: 13125-002001  
15 <140> CURRENT APPLICATION NUMBER: 09/847,637B  
16 <141> CURRENT FILING DATE: 2001-05-02  
18 <150> PRIOR APPLICATION NUMBER: PCT/IL99/00595  
19 <151> PRIOR FILING DATE: 1999-11-04  
21 <150> PRIOR APPLICATION NUMBER: 60/107,213  
22 <151> PRIOR FILING DATE: 1998-11-05  
24 <160> NUMBER OF SEQ ID NOS: 9  
26 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
28 <210> SEQ ID NO: 1  
29 <211> LENGTH: 22  
30 <212> TYPE: PRT  
31 <213> ORGANISM: Mycobacterium tuberculosis  
33 <400> SEQUENCE: 1  
34 Gly Pro Lys Gly Arg Asn Val Val Leu Glu Lys Lys Trp Gly Ala Pro  
35 1 5 10 15  
36 Thr Ile Thr Asn Asp Gly  
37 20  
39 <210> SEQ ID NO: 2  
40 <211> LENGTH: 16  
41 <212> TYPE: PRT  
42 <213> ORGANISM: Mycobacterium tuberculosis  
44 <400> SEQUENCE: 2  
45 Gly Pro Lys Gly Arg Asn Val Val Leu Glu Lys Lys Trp Gly Ala Pro  
46 1 5 10 15  
48 <210> SEQ ID NO: 3  
49 <211> LENGTH: 16  
50 <212> TYPE: PRT  
51 <213> ORGANISM: Mycobacterium tuberculosis  
53 <400> SEQUENCE: 3  
54 Val Val Leu Glu Lys Lys Trp Gly Ala Pro Thr Ile Thr Asn Asp Gly  
55 1 5 10 15  
57 <210> SEQ ID NO: 4  
58 <211> LENGTH: 20  
59 <212> TYPE: PRT  
60 <213> ORGANISM: Homo sapiens  
62 <400> SEQUENCE: 4

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63 Thr Val Ile Ile Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp
64 1 5 10 15
65 Gly Val Thr Val
66 20
68 <210> SEQ ID NO: 5
69 <211> LENGTH: 67
70 <212> TYPE: DNA
71 <213> ORGANISM: Homo sapiens
73 <400> SEQUENCE: 5
74 gccgccatgg gaccaaaggg acgcaacgtg gtactagaga agaaatgggg cgcgccgtag 60
75 ctcgaga 67
77 <210> SEQ ID NO: 6
78 <211> LENGTH: 540
79 <212> TYPE: PRT
80 <213> ORGANISM: Mycobacterium tuberculosis
82 <400> SEQUENCE: 6
83 Met Ala Lys Thr Ile Ala Tyr Asp Glu Glu Ala Arg Arg Gly Leu Glu
84 1 5 10 15
85 Arg Gly Leu Asn Ala Leu Ala Asp Ala Val Lys Val Thr Leu Gly Pro
86 20 25 30
87 Lys Gly Arg Asn Val Val Leu Glu Lys Lys Trp Gly Ala Pro Thr Ile
88 35 40 45
89 Thr Asn Asp Gly Val Ser Ile Ala Lys Glu Ile Glu Leu Glu Asp Pro
90 50 55 60
91 Tyr Glu Lys Ile Gly Ala Glu Leu Val Lys Glu Val Ala Lys Lys Thr
92 65 70 75 80
93 Asp Asp Val Ala Gly Asp Gly Thr Thr Thr Ala Thr Val Leu Ala Gln
94 85 90 95
95 Ala Leu Val Arg Glu Gly Leu Arg Asn Val Ala Ala Gly Ala Asn Pro
96 100 105 110
97 Leu Gly Leu Lys Arg Gly Ile Glu Lys Ala Val Glu Lys Val Thr Glu
98 115 120 125
99 Thr Leu Leu Lys Gly Ala Lys Glu Val Glu Thr Lys Glu Gln Ile Ala
100 130 135 140
101 Ala Thr Ala Ala Ile Ser Ala Gly Asp Gln Ser Ile Gly Asp Leu Ile
102 145 150 155 160
103 Ala Glu Ala Met Asp Lys Val Gly Asn Glu Gly Val Ile Thr Val Glu
104 165 170 175
105 Glu Ser Asn Thr Phe Gly Leu Gln Leu Glu Leu Thr Glu Gly Met Arg
106 180 185 190
107 Phe Asp Lys Gly Tyr Ile Ser Gly Tyr Phe Val Thr Asp Pro Glu Arg
108 195 200 205
109 Gln Glu Ala Val Leu Glu Asp Pro Tyr Ile Leu Leu Val Ser Ser Lys
110 210 215 220
111 Val Ser Thr Val Lys Asp Leu Leu Pro Leu Leu Glu Lys Val Ile Gly
112 225 230 235 240
113 Ala Gly Lys Pro Leu Leu Ile Ile Ala Glu Asp Val Glu Gly Glu Ala
114 245 250 255
115 Leu Ser Thr Leu Val Val Asn Lys Ile Arg Gly Thr Phe Lys Ser Val

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116          260          265          270
117 Ala Val Lys Ala Pro Gly Phe Gly Asp Arg Arg Lys Ala Met Leu Gln
118          275          280          285
119 Asp Met Ala Ile Leu Thr Gly Gly Gln Val Ile Ser Glu Glu Val Gly
120          290          295          300
121 Leu Thr Leu Glu Asn Ala Asp Leu Ser Leu Leu Gly Lys Ala Arg Lys
122 305          310          315          320
123 Val Val Val Thr Lys Asp Glu Thr Thr Ile Val Glu Gly Ala Gly Asp
124          325          330          335
125 Thr Asp Ala Ile Ala Gly Arg Val Ala Gln Ile Arg Gln Glu Ile Glu
126          340          345          350
127 Asn Ser Asp Ser Asp Tyr Asp Arg Glu Lys Leu Gln Glu Arg Leu Ala
128          355          360          365
129 Lys Leu Ala Gly Gly Val Ala Val Ile Lys Ala Gly Ala Ala Thr Glu
130          370          375          380
131 Val Glu Leu Lys Glu Arg Lys His Arg Ile Glu Asp Ala Val Arg Asn
132 385          390          395          400
133 Ala Lys Ala Ala Val Glu Glu Gly Ile Val Ala Gly Gly Gly Val Thr
134          405          410          415
135 Leu Leu Gln Ala Ala Pro Thr Leu Asp Glu Leu Lys Leu Glu Gly Asp
136          420          425          430
137 Glu Ala Thr Gly Ala Asn Ile Val Lys Val Ala Leu Glu Ala Pro Leu
138          435          440          445
139 Lys Gln Ile Ala Phe Asn Ser Gly Leu Glu Pro Gly Val Val Ala Glu
140          450          455          460
141 Lys Val Arg Asn Leu Pro Ala Gly His Gly Leu Asn Ala Gln Thr Gly
142 465          470          475          480
143 Val Tyr Glu Asp Leu Leu Ala Ala Gly Val Ala Asp Pro Val Lys Val
144          485          490          495
145 Thr Arg Ser Ala Leu Gln Asn Ala Ala Ser Ile Ala Gly Leu Phe Leu
146          500          505          510
147 Thr Thr Glu Ala Val Val Ala Asp Lys Pro Glu Lys Glu Lys Ala Ser
148          515          520          525
149 Val Pro Gly Gly Gly Asp Met Gly Gly Met Asp Phe
150          530          535          540
152 <210> SEQ ID NO: 7
153 <211> LENGTH: 573
154 <212> TYPE: PRT
155 <213> ORGANISM: Rattus norvegicus
157 <400> SEQUENCE: 7
158 Met Leu Arg Leu Pro Thr Val Leu Arg Gln Met Arg Pro Val Ser Arg
159 1 5 10 15
160 Ala Leu Ala Pro His Leu Thr Arg Ala Tyr Ala Lys Asp Val Lys Phe
161 20 25 30
162 Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu Leu Ala
163 35 40 45
164 Asp Ala Val Ala Val Thr Met Gly Pro Lys Gly Arg Thr Val Ile Ile
165 50 55 60
166 Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp Gly Val Thr Val

```

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167	65					70						75				80
168	Ala	Lys	Ser	Ile	Asp	Leu	Lys	Asp	Lys	Tyr	Lys	Asn	Ile	Gly	Ala	Lys
169					85					90					95	
170	Leu	Val	Gln	Asp	Val	Ala	Asn	Asn	Thr	Asn	Glu	Glu	Ala	Gly	Asp	Gly
171				100					105					110		
172	Thr	Thr	Thr	Ala	Thr	Val	Leu	Ala	Arg	Ser	Ile	Ala	Lys	Glu	Gly	Phe
173				115					120					125		
174	Glu	Lys	Ile	Ser	Lys	Gly	Ala	Asn	Pro	Val	Glu	Ile	Arg	Arg	Gly	Val
175		130					135					140				
176	Met	Leu	Ala	Val	Asp	Ala	Val	Ile	Ala	Glu	Leu	Lys	Lys	Gln	Ser	Lys
177	145					150					155				160	
178	Pro	Val	Thr	Thr	Pro	Glu	Glu	Ile	Ala	Gln	Val	Ala	Thr	Ile	Ser	Ala
179					165					170					175	
180	Asn	Gly	Asp	Lys	Asp	Ile	Gly	Asn	Ile	Ile	Ser	Asp	Ala	Met	Lys	Lys
181				180					185					190		
182	Val	Gly	Arg	Lys	Gly	Val	Ile	Thr	Val	Lys	Asp	Gly	Lys	Thr	Leu	Asn
183			195					200					205			
184	Asp	Glu	Leu	Glu	Ile	Ile	Glu	Gly	Met	Lys	Phe	Asp	Arg	Gly	Tyr	Ile
185		210					215					220				
186	Ser	Pro	Tyr	Phe	Ile	Asn	Thr	Ser	Lys	Gly	Gln	Lys	Cys	Glu	Phe	Gln
187	225					230					235				240	
188	Asp	Ala	Tyr	Val	Leu	Leu	Ser	Glu	Lys	Lys	Ile	Ser	Ser	Val	Gln	Ser
189				245					250						255	
190	Ile	Val	Pro	Ala	Leu	Glu	Ile	Ala	Asn	Ala	His	Arg	Lys	Pro	Leu	Val
191			260					265						270		
192	Ile	Ile	Ala	Glu	Asp	Val	Asp	Gly	Glu	Ala	Leu	Ser	Thr	Leu	Val	Leu
193			275					280					285			
194	Asn	Arg	Leu	Lys	Val	Gly	Leu	Gln	Val	Val	Ala	Val	Lys	Ala	Pro	Gly
195		290					295					300				
196	Phe	Gly	Asp	Asn	Arg	Lys	Asn	Gln	Leu	Lys	Asp	Met	Ala	Ile	Ala	Thr
197	305					310					315				320	
198	Gly	Gly	Ala	Val	Phe	Gly	Glu	Glu	Gly	Leu	Asn	Leu	Asn	Leu	Glu	Asp
199				325						330					335	
200	Val	Gln	Ala	His	Asp	Leu	Gly	Lys	Val	Gly	Glu	Val	Ile	Val	Thr	Lys
201				340					345					350		
202	Asp	Asp	Ala	Met	Leu	Leu	Lys	Gly	Lys	Gly	Asp	Lys	Ala	His	Ile	Glu
203			355					360					365			
204	Lys	Arg	Ile	Gln	Glu	Ile	Thr	Glu	Gln	Leu	Asp	Ile	Thr	Thr	Ser	Glu
205		370					375					380				
206	Tyr	Glu	Lys	Glu	Lys	Leu	Asn	Glu	Arg	Leu	Ala	Lys	Leu	Ser	Asp	Gly
207	385					390					395				400	
208	Val	Ala	Val	Leu	Lys	Val	Gly	Gly	Thr	Ser	Asp	Val	Glu	Val	Asn	Glu
209				405					410						415	
210	Lys	Lys	Asp	Arg	Val	Thr	Asp	Ala	Leu	Asn	Ala	Thr	Arg	Ala	Ala	Val
211				420					425					430		
212	Glu	Glu	Gly	Ile	Val	Leu	Gly	Gly	Gly	Cys	Ala	Leu	Leu	Arg	Cys	Ile
213			435					440					445			
214	Pro	Ala	Leu	Asp	Ser	Leu	Lys	Pro	Ala	Asn	Glu	Asp	Gln	Lys	Ile	Gly
215		450					455					460				

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```

216 Ile Glu Ile Ile Lys Arg Ala Leu Lys Ile Pro Ala Met Thr Ile Ala
217 465 470 475 480
218 Lys Asn Ala Gly Val Glu Gly Ser Leu Ile Val Glu Lys Ile Leu Gln
219 485 490 495
220 Ser Ser Ser Glu Val Gly Tyr Asp Ala Met Leu Gly Asp Phe Val Asn
221 500 505 510
222 Met Val Glu Lys Gly Ile Ile Asp Pro Thr Lys Val Val Arg Thr Ala
223 515 520 525
224 Leu Leu Asp Ala Ala Gly Val Ala Pro Leu Leu Thr Thr Ala Glu Ala
225 530 535 540
226 Val Val Thr Glu Ile Pro Lys Glu Glu Lys Asp Pro Gly Met Gly Ala
227 545 550 555 560
228 Met Gly Gly Met Gly Gly Gly Met Gly Gly Gly Met Phe
229 565 570
231 <210> SEQ ID NO: 8
232 <211> LENGTH: 573
233 <212> TYPE: PRT
234 <213> ORGANISM: Homo sapiens
236 <400> SEQUENCE: 8
237 Met Leu Arg Leu Pro Thr Val Phe Arg Gln Met Arg Pro Val Ser Arg
238 1 5 10 15
239 Val Leu Ala Pro His Leu Thr Arg Ala Tyr Ala Lys Asp Val Lys Phe
240 20 25 30
241 Gly Ala Asp Ala Arg Ala Leu Met Leu Gln Gly Val Asp Leu Leu Ala
242 35 40 45
243 Asp Ala Val Ala Val Thr Met Gly Pro Lys Gly Arg Thr Val Ile Ile
244 50 55 60
245 Glu Gln Ser Trp Gly Ser Pro Lys Val Thr Lys Asp Gly Val Thr Val
246 65 70 75 80
247 Ala Lys Ser Ile Asp Leu Lys Asp Lys Tyr Lys Asn Ile Gly Ala Lys
248 85 90 95
249 Leu Val Gln Asp Val Ala Asn Asn Thr Asn Glu Glu Ala Gly Asp Gly
250 100 105 110
251 Thr Thr Thr Ala Thr Val Leu Ala Arg Ser Ile Ala Lys Glu Gly Phe
252 115 120 125
253 Glu Lys Ile Ser Lys Gly Ala Asn Pro Val Glu Ile Arg Arg Gly Val
254 130 135 140
255 Met Leu Ala Val Asp Ala Val Ile Ala Glu Leu Lys Lys Gln Ser Lys
256 145 150 155 160
257 Pro Val Thr Thr Pro Glu Glu Ile Ala Gln Val Ala Thr Ile Ser Ala
258 165 170 175
259 Asn Gly Asp Lys Glu Ile Gly Asn Ile Ile Ser Asp Ala Met Lys Lys
260 180 185 190
261 Val Gly Arg Lys Gly Val Ile Thr Val Lys Asp Gly Lys Thr Leu Asn
262 195 200 205
263 Asp Glu Leu Glu Ile Ile Glu Gly Met Lys Phe Asp Arg Gly Tyr Ile
264 210 215 220
265 Ser Pro Tyr Phe Ile Asn Thr Ser Lys Gly Gln Lys Cys Glu Phe Gln
266 225 230 235 240

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**VERIFICATION SUMMARY**

**PATENT APPLICATION: US/09/847,637B**

**DATE: 04/18/2002**

**TIME: 14:49:14**

**Input Set : A:\13125-002001.txt**

**Output Set: N:\CRF3\04182002\I847637B.raw**